DOCUMENT RESUME

ED 280 569 PS 016 371

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TITLE The Knowledge Base of Kindergarten Education.
PUB DATE 9 Jan 87
NOTE 21p.; Paper presented at the Five-Year-Olds in School Conference (East Lansing, MI, January 9, 1987).
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cognitive Development; *Educational Change; *Kindergarten; *Literacy; Piagetian Theory; *Prereading Experience; Primary Education; Public Schools; *Socialization

ABSTRACT

After introductory remarks on the magnitude of changes that have taken place in early childhood education within the last 30 years, discussion focuses on early childhood research related to cognitive learning, social learning, and literacy. Social learning in kindergarten is discussed in terms of research findings on the effects of positive social reinforcement, nurturance, modeling, the need to set clear expectations for student behavior, the assignment of personal attributes, peer group membership, and the need to learn the student role. The topic of kindergarten and literacy is discussed in terms of approaches to early reading instruction, reading readiness programs, programs integrating reading and writing with children's ideas and vocal utterances, programs emphasing comprehension, and the characteristics of a literacy-rich kindergarten environment. Cognitive learning in early childhood education is discussed in terms of research based on a Piagetian perspective. Brief concluding remarks focus on current knowledge bases for designing and implementing an appropriate kindergarten curriculum, and the need for teachers to integrate their professional knowledge with community wishes for kindergarten instruction. (RH)

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THE KNOWLEDGE BASE OF KINDERGARTEN EDUCATION [1]

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If we compare what is happening in kindergartens today with what was happening in kindergarten ten, twenty and thirty years ago, we become aware of the tremendous change that has taken place in early childhood education in the recent past. The increase in the number of children in kindergarten in our country may be most apparent. Two decades ago less than half of the five-year-olds were attending kindergarten; today over ninety percent of the five-year-olds are in kindergarten. The school year 1985-1986 was the first one in which every state in the union offered kindergarten as part of the public school. (The first public school kindergarten was established in 1874; it has taken kindergarten education over a century to become institutionalized in our country.) Today kindergarten education is not being denied to children because their families cannot afford to pay for it, or because they live in a state where kindergartens are not provided in public schools.

Other changes have taken place in kindergarten as well. All-day every day kindergarten programs are being established in state after state. Four-year-old kindergartens are also being offered in many communities, sometimes on a pilot basis. Early

[1] Paper presented at the five Year Olds in School conference, Michigan State University, East lansing, MI, January 9, 1987.

PS 016371

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kindergartens provided half day programs for children with kindergarten teachers spending the other half day working with parents. As parent education was eliminated, teachers were given two kindergarten sessions to teach so their working day would be comparable to that of elementary teacher. While in some rural areas children went to full day kindergarten for part of the week - often to save a school bus run -the conventional wisdom was that kindergarten children were too young to spend the full day in school (at least those who lived in urban and suburban areas and had no need for full day care).

We are also educating many more diverse children in our schools today. For more than twenty years Head Start programs have offered education for children who were poor and who came from minority backgrounds - children who demographically had a lower chance for success in school and in society. Even though only a small minority -about 20% - of eligible children are enrolled, Head Start has had a long term and pervasive impact on its clients as well as on education as a whole. Large numbers of handicapped children are also being educated today, with schools often enrolling these children earlier than their nonhandicapped counterparts. This, too, represents a group for whom education had been denied.

These changes in early childhood education have paralleled changes in our society and changes in educational and developmental theory. The greater thrust for equality of social opportunity led to a greater thrust for an equality of

educational opportunity. Changes in views regarding individual rights, including children rights, changes in the nature of the American family and changes in the role of women all influenced changes in early childhood education.

With more women working in America, with more single parent families and nuclear families with both parents employed, came an increased need for child care services. The high priority demand for child care services led to expansion in the number of child care centers, mostly private, as well as in day care homes. The worry about whether there were enough programs often overshadowed any concern about the quality of programs, as long as they are physically safe.

As the early childhood enterprise grew, it began to be taken seriously. Parents became concerned about the consequences of having their child in a program. Administrators felt they must justify the cost of these programs. Minimum costs might be justified by keeping a child safe, but higher costs ought to result in worthier programs.

Textbook publishers saw a new market - the kindergarten- open up as school markets at other levels were shrinking with the shrinking child population. Thus textbook series designed for elementary schools incorporated the kindergarten along with the grades and were sold as a total system. Public school educators often felt that this grade should be evaluated in the same terms as other grades. In addition, as public schools came under

increased criticism for inadequate academic achievement, they saw kindergarten as an additional year to teach for academic goals.

Suddenly early childhood education, and especially kindergarten, became the focus of attention of many publics: Educators, politicians, parents, and educational suppliers. Each had their own stake in the kindergarten. Each saw the kindergarten as a fertile place for development. Too often, the nature of the kindergarten child was lost sight of in the discourse that was created. Since four- and five-year-olds are inarticulate, child advocates, often the organized early childhood education field came to their defence.

The concern of these child advocates has been articulated in a number of position papers by local (e.g., Chicago AEYC), state (e.g., Texas AEYC) and national groups (e.g., NAEYC). These position papers are useful statements of values regarding what is important in the education of young children. However, they are limited in the guidance they provide. They do not consider what is effective in educating young children. They tell us what is <u>good</u> to do to and with young children, but not what is <u>useful</u> to do with young children.

Early childhood education, like all education, is a deliberate intervention in the lives of young children. It results from a belief that children growing up naturally might not come to know all the things we want them to know. We create schools and design experiences to change the nature of childhood in order to change the nature of the child. We justify these

institutions and experiences because they make a difference in the lives of children (a recent report on early childhood programs has been titled "Changed Lives"). Programs that do not change lives can be considered ineffective.

We need to be concerned not only that experiences are developmentally appropriate, but also that experiences are educationally useful to children, either in terms of achieving the objectives of early childhood education or in allowing children to achieve later educational objectives. An experience must not only be developmentally appropriate, it must also be educationally appropriate and worthwhile. We must look both to our values and at our technical knowledge in considering what childhood educational experiences should be like. The research literature on the outcomes of early childhood education can be useful here.

We know a lot about this area. A few years ago I edited a book called the HANDBOOK OF RESEARCH IN EARLY CHILDHOOD EDUCATION (Free Press, 1982). It is a good and useful book , but it is big, expensive and written for scholars rather than for classroom teachers or parents. While it is referenced in research articles, it has not gotten into the popular literature of the field. It is not a book that teachers will use . This past year, I edited a much shorter volume which focuses primarily on kindergarten education. It is called TODAY'S KINDERGARTEN; EXPLORING THE KNOWLEDGE BASE, EXTENDING THE CURRICULUM. (Teachers College Press, 1986). I want to make reference to the material

in this book in talking not only about what we can do in kindergarten, but also about why we can to it.

In the short time I have, I will touch on some of the research related to social learning, literacy, and cognitive learning. I also want to talk briefly about some of the ways that priorities are established in early childhood education and some of the responses we, as teachers, need to make to the contemporary educational scene. My topic is broad and my time is limited. This will not be an in-depth review, but it should be worthwhile.

Social Learning in Kindergarten

At one time, entrance to kindergarten was the child's first move outside the home. Today, most children entering kindergarten have already been in a "preschool." The kindergarten child still needs to be socialized and many of the key goals of kindergarten education relate to social learning. Shirley Moore, in her chapter on social learning in kindergarten, presents ideas base on research in the areas of adult-child interactions, group membership, and learning the student role. Moore identifies five strategies shown to be useful in helping children develop social learning: using positive social reinforcement, providing a nurturing environment, modeling acceptable behavior, setting expectations and standards for behavior, and character attribution.

Positive social reinforcement - A great deal of research has been done in the area of applied behavior analysis theory that is related to early childhood education (Bushell, 1982). One of the more effective ways of having children learn proper social behavior is through contingent positive reenforcement. Young children are sensitive to teachers' praise, smiles, hugs, compliments and other shows of affection. At the same time, misbehavior should be ignored. Positive behaviors tend to be repeated and negative ones discarded in response to contingent reinforcers,

Unfortunately, research indicates that teachers often reward the good behavior of problem children less often that the good behavior of well-behaved children. They also tend to be alert to their misbehavior, attempting to stamp it out early. Perhaps this situation should be rectified. It is important that positive reinforcement not be given out so lavishly or frivolously as to lose its meaning. But successive approximations of positive behavior should be reinforced in problem children so that they begin to move in proper directions and some noncontingent reinforcement should also be provided in class.

Nurturance - Research on child rearing can be applied with some discretion to the teacher - child relationship. It would suggest that teachers, to be effective, should be warm, supportive, and considerate. Punishment, when used, should be nonphysical. Disapproval is very effective in eliciting conformity.

Modeling - Children tend to imitate the behavior of those they consider to be competent. They tend to imitate the social skills, values, attitudes, and even gestures of their teachers. Ultimately, they come to think and behave as their model. Teachers can model the role of student regularly to their children, sometimes pleading ignorance, displaying curiosity and actively seeking knowledge. These behaviors will be emulated by their students.

Setting clear expectations - Studies of social responsibility have shown the importance of communicating clear expectations and placing appropriate demands on children. Young children may need many reminders of what is expected of them. Teachers need to be explicit in what is acceptable and unacceptable behavior. In addition, if it is communicated to the child that he is competent and capable of learning, the probability of success in learning is increased. Too often teachers will admonish boys for not learning and attribute failure to their lack of effort. Girls, on the other hand, will be seen as lacking in ability, and lesser performance will be accepted from them. These cultural biases, may not reflect real differences in ability, but they can lead to boys doing better in some areas and girls in others.

Attributions - One way that parents get children to perform responsible, considerate and unselfish acts is by referring to their children as being capable of acting that way. Telling children they are kind, cooperative, careful workers will lead

children to think of themselves and to act in that way. Psychologists caution that the attribution made to a child must be "believable," that is within the realm of possibility, for that child.

One must be cautious here. Not too much is known about how the mechanics of this process works. In addition, there can be negative as well as positive attributions. Studies of children in classrooms indicate that different roles are attributed to the varying persons in the class and the children's behaviors tend to remain constant throughout the school year in relation to the role that is established early in the year.

Peer Group Member

Young children bring a wide repertoire of social behavior to kindergarten. Their positive social approaches overshadow their negative ones. They are skillful in making and keeping friends. As children become friends, their social repertoires become more complex. They also develop skills at cooperating in learning tasks. They are capable of interpreting the emotional states of others and are beginning to understand the perspectives and motives of their peers

Children at this age are also learning to show consideration for others and altruism. Children need to be helped to think of themselves as kind, considerate and helpful. Teachers can call attention to the needs of others and model considerate behavior themselves. Kindergarteners can also learn to share their feelings and become aware of the feelings of their classmates.

Sharing feelings and telling about their own experiences helps children become members of a group.

Whenever children are grouped together, there is the possibility of conflict. In young children, physical conflict slowly gives way to verbal arguments. As children grow older, their physical aggression tends to be more retaliatory than unprovoked. They learn to express their displeasure, resist unreasonable demands, and expect fair treatment from their peers. In dealing with conflict, they learn to follow and understand rules, persuade with reason, compromise, and negotiate. As a result of such conflict resolution, they become less egocentric and more sociocentric. While teachers often feel they must settle disagreements among children, kindergartners are becoming quite capable of negotiating solutions to problems.

Student Role

As children enter the school, they learn what it takes to play the role of student. They also learn to evaluate themselves within this role. They develop a sense of self as more or less capable. Interestingly, more kindergarten children rate themselves near the top of the class and rate tasks as easier than do older children who develop a more realistic sense of themselves and what is expected of them. Self-esteem grows as children sense the positive perception and evaluation of them by others.

Children also develop a sense of where the control over their lives exist: within themselves or outside of themselves.

Young children generally sense an internal locus of control. As they go through school they develop a more external orientation, being sensitive to grades and teacher assessments. Hopefully, a balanced sense of what drives children's lives will evolve, with children becoming aware that their own ability and effort carries as much weight as task difficulty or luck. Some children come to feel that there is nothing they can do to avoid failure while others are willing to accept challenges. The differences in these feelings can have their roots in children's initial experience in school. kindergarten teachers need to be concerned about matching expectations to childlren's abilities and helping children develop a realistic sense of what they can and cannot do. Early failure and the need for remedial education needs to be dealt with in such a way that children preserve their own sense of self-worth and their enthusiasm for school.

Kindergarten and Literacy

The quest for universal literacy has become the major goal of education in our country. Schooling is dependent on the student being able to read; adult success is dependent both upon success in school and on literacy. Reading has become increasingly important.

While we value reading, we are not universally successful in teaching children to read beyond the basic literacy level. In the quest for greater success, educators have looked for new and better ways to teach reading, have sought to improve beginning

reading instruction, and have suggested that reading instruction begin earlier. In many schools reading instruction, traditionally beginning in first grade, has been introduced into the kindergarten.

Early research on beginning reading attempted to link reading success to children's development. Studies were done to determine as what age children would have the greatest potential success rate in reading instruction. Theories of maturational "readiness" or" critical developmental periods" were posited. Reading instruction was delayed or accelerated depending upon the assessment of the child's level of maturation. Sometimes age was used as an indicator of readiness; sometimes other developmental indicators were used, such as readiness tests, IQ tests, or wrist bone development. Failure to learn to read was seen as an indicator of immaturity. Parents were often admonished not to do anything that might encourage children to read early at home, but rather wait until the child goes to school and leaving the teaching to the professionals.

A later view of early reading instruction suggested that reading was not simply dependent upon maturation, but was rather an aggregate of skills. Visual discrimination, auditory discrimination, left-to-right eye movements, verbal memory skills, memory skills, and other skills were all identified as being part of reading. By teaching the skills independently, it was believed that children could be prepared for the complex act

of reading which would them to put these skills together in the reading act.

In order to accomplish this, readiness programs were developed to be used with children before formal reading instruction. Materials were developed to help children practice visual discrimination skills, identify letters, match letters with the sounds of words or pictures, move from the left side of the page to the right, and so forth. The tasks were ordered in terms of their degree of difficulty and bound into a workbook with specific instructions for teachers to follow. Generally these programs focussed on letter-sound associations and/or on developing a basic sight vocabulary that could be used in a particular basal reading series. Seldom was attention given to teaching an understanding of language or comprehension skills since these skills were thought to be best left for later.

Current research suggests that reading consists of much more that learning a set of descrete skills. Reading is coming to be seen more as a part of the total complex of language learning. Thus reading, writing, speaking and listening are intertwined. This has led early educators to focus more on literacy as a process rather than on early reading instruction. Programs have been developed that integrate reading and writing and that base the child's reading on his ideas and vocal utterances. "Invented Spelling" and "Write into Reading" are examples of approaches to early reading instruction that take this more holistic approach.

Comprehension is seen as critical even to the most beginning exercises in reading instruction.

Jana Mason describes a perspective on reading that views it as a thinking and understanding act and views learning to read as a constructive, problem-solving process. Children interpret ideas and relate them to their own knowledge and experience in reading. Monitoring their own understandings and putting together their own underlying structure of information becomes the focus of children's learning to read. Learning to monitor one's own comprehension is an essential element in learning to read. This can be done, for example, by listening to stories and then later acting out or talking about story events. A broad base of linguistic knowledge including an awareness of grammatical elements and the comprehensibility of language can help children become better readers. This focusses the child's attention on meanings rather than on structural elements of texts. Children can also be helped to talk about being confused about a story they have heard and what they might do to understand it.

Children can also be helped to learn to read differently for different purposes by having different kinds of materials read to them - poems, information articles as well as stories. They can also be asked to predict what might happen in a story as the teacher stops at a strategic point and asks the children to think about the story.

All this suggests that teachers need to create a literacy-rich kindergarten environment. Children's drawings and paintings

can be tied to writing opportunities, as they print their names or a title on the paper or construct a story about the picture. Children can learn to recognize their names and learn to read and write it. Written signs and labels can be used wherever possible. Children can also be encouraged to write their own names as well as labels as best they can. They can also begin to write short stories themselves, with teachers encouraging the children to write what they hear, using invented spelling at first, which will give way to proper spelling later.

Favorite stories can be read over and over again and audiotaped versions of the story can be provided along with the books for the children to use. While listening to stories is important, children should be encouraged to process what they hear. They should discuss elements of a story, or answer questions about the story after it has been read. Discussions about a story should focus not only on the plot, but on the structural elements of the story as well. Children can also act out the stories they have heard.

A literacy rich kindergarten environment filled with books and with opportunities to read, write, listen and speak is the foundation of a kindergarten reading program. Such a program cam make use of a variety of resources including story and information books, tape recorders, paper and pencil and the like. It need not be based on the limited workbook exercises often seen in class. Most important it should be integrated with all the other program areas in the kindergarten. As reading is seen as

an important tool of language and language is seen as an important tool for all activities, reading will take on increasing meaning for kindergarten children.

Cognitive Learning

Three research traditions are evident in the area of cognitive learning in early childhood education: research based on a Piagetian perspective, descriptive research, and research based on information-processing theory (Price, 1982). I would like to focus on research from a Piagetian perspective here. From this perspective, children acquire knowledge by constructing it internally through interactions with their environment. They construct it as an organized whole (Kamii, 1986).

Piaget has distinguished between three types of cognitive knowledge: physical knowledge, logico-mathematical knowledge, and social (conventional) knowledge. Physical knowledge is knowledge of external reality. It is related to the physical characteristics and attributes of things and can be known by observation. Logico-mathematical knowledge is made up of relationships created by the individual. Social knowledge consists of conventions that have been created by groups of people. All three forms of knowledge are interrelated as people order their perceptions of objects (classifying by color or size, for example) and give conventional names to these categories ("red" or "big").

From a Piagetian point of view, time and space are not relationships that can be discovered, but must be constructed. While young children may use the same language as adults, their conceptions of time and space may be quite different. Children also have to construct their own logical systems, including hierarchical class inclusion systems (Lansing, Michigan, U.S.A.). Their ability to deal with reversibility (a+b=c; c=a+b) usually occurs in the primary grades.

Children's concept of number also needs to be constructed by them. Thus, number concepts are not directly teachable, though the ability to count, which is social knowledge can be taught. In terms of measurements, units of measurement can be taught as social knowledge, but the reasoning behind how units are used in measurement, again, must be constructed by children. Measuring time is more difficult for children than measuring length or volume, since it has to be deduced.

Piaget considers three forms of representation: indices, symbols and signs. An index is a part of an object or is causally related to it (a cat's meow can stand for the cat). Symbols bear a resemblance to the objects they represent (a picture of a cat). Signs are conventional forms of representation and bear no resemblance to the object they represent (the word cat has no relationship to the object).

A picture of a number of objects is more readily understood than a numeral, which is a convention that must be taught. As signs (in the Piagetian sense), learning numerals is learning to

read. Using symbolic representations (pictures, objects, block constructions and the like) might be a better way to start children in learning arithmetic than using numerals.

From a Piagetian perspective, much of science, mathematics, and social science cannot be taught in the conventional sense, that is through direct instruction, such as lecturing or demonstrating. Instead, the teacher must create situations in which children can construct meanings. Opportunities to explore, experiment with, and observe natural phenomena, and then to communicate what is observed is helpful in teaching science. The simple "Sink or Float" activity, for example, requires that children observe objects and their actions and then categorize these objects based on these actions. It is an example of how children develop their own knowledge based on observations and manipulations of their environment. Group games, such as simple board games and card games are also helpful. Having children interact with one another and resolve conflicts about what they observe or count, for example, is also useful. The responsibility of the teacher is to know what we want children to know and what they are capable of knowing. The teacher must create situations in the kindergarten where children encounter both the physical and social world, and and try to make sense of these. Through these encounters, children will develop knowledge based upon the relationships they create. The system of knowledge the children create will become more coherent as they

become more knowledgeable. It will not be forgotten, but can always be reconstructed by the child.

Kindergarten and Children's Knowledge

I have only touched on a few areas of the kindergarten program in my discussion. I have not presented research on play and and its implications for early education, though there is a considerable amount. I have not presented reseach on music and movement education and young children, of which there is some. Nor have I presented research on the visual arts and aesthetics and the kindergarten, of which there is considerably less. I chose areas to discuss based upon the concerns that educators and lay groups consider to be important for children to learn. And their concerns must be addressed.

Over the years we have changed our judgements about what is important for children to learn in kindergarten. These judgements relate to particular conceptions of childhood, as well as to our theories of child development and children's learning. These also have changed. We also need to consider what we wish our children to know. Different forms of knowledge are gained in different ways and thus influence our curriculum. Acquiring knowledge of language is a different from acquiring knowledge of mathematics, and these in turn are different from social knowledge or values. When we are clear about what we want young children to know, we are better able to design an appropriate curriculum, and we are better able to identify the most

appropriate teaching methods. Not all teaching should be direct; not all learning should be memorization.

Finally, what we want children to come to know in kindergarten is dependent upon what our community decides is important for children to know. We need to work with community agents to identify our kindergarten goals, then use our professional knowledge, both our technical knowledge and our practical knowledge, to create worthwhile kindergarten programs for children in school today.